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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,736	04/04/2001	Gerlinde Bischoff	1583	7767

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Striker Striker & Stenby
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EXAMINER
SINES, BRIAN J

ART UNIT	PAPER NUMBER
1743	2

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

AS-4

Office Action Summary

Application No.

09/806,736

Applicant(s)

BISCHOFF ET AL.

Examiner

Brian J. Sines

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 April 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1. 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 – 8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1 – 6, it is unclear as to what as to the meaning of "... a sensor-active layer in the form of an electrical dipole ..." in lines 1 and 2. Is a bulk electrical property, such as the conductivity or electrical dipole, of the analyte-sensitive layer measured in the detection of the analyte?

Claim 7 recites the limitation "substance (4)" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "surface (8)" in lines 9. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the use of "EDP" networks in line 4. What is an EDP network? EDP appears to be not defined in the specification.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 – 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Choulga et al. (WO 96/12176, as evidenced by U.S. Pat. No. 6,004,442 A): U.S. Patent. No. 6,004,442 A was filed as the National Stage application of WO 96/12176. As disclosed in the patent, regarding claim 1, Choulga et al. teach a measuring probe (biosensor, 2) with a sensor-active layer (analyte-specific polymer membrane, 8) (see col. 14, lines 15 – 39). Choulga et al. teach that no electron transfer is necessary between the electrodes and the analyte-specific layer during AC measurements. The analyte specific layer is modified so that there are changes in the electrical properties, such as an electrical dipole, of the layer in the presence of ions or other materials contained within the sample solution (see col. 4, lines 15 – 39). In use, as shown in figures 1 and 2, the solution (4) would form a covering film over the biosensor (1, 2) (see col. 13, lines 46 – 52; col. 14, lines 15 – 39). Regarding claim 2, it is inherently anticipated that the solution, which comprises the covering film, would consist of water. Regarding claim 3, it is inherently anticipated that the solution would consist of the liquid to be analyzed. Regarding claim 4, Choulga et al. teach that several measuring probes can be combined in an array configuration. Choulga et al. teach that multi-analyte probes, which are produced by the combination or integration of multiple electrodes on a sensor unit or on a carrier, covered with layers specific for various analytes (see col. 16, lines 48 – 64). Regarding claim 5, Choulga et al. teach that sensors of mediums selectivity can be integrated in a multi-sensor unit (see col. 16, lines 48 – 64). Regarding claim 6, Choulga et al. teach that the disclosed sensor design is compatible with microelectronics, particularly with integrated circuit (IC) technology,

and that the sensor arrays can be easily integrated on a substrate together with electronic signal processing systems (see col. 4, lines 40 – 56). Therefore, Choulga et al. anticipate that the disclosed sensor design may be directly implemented into the control circuit of a semiconductor component. Regarding claim 7, Choulga et al. teach that a measurement procedure for the determination of total or absolute conductance (see col. 3, lines 17 – 29; col. 4, lines 43 – 67).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Choulga et al. in view of Tawil et al. (U.S. Pat. No. 5,572,027 A). Choulga et al. do not specifically teach that the measurement data from the sensor may be transmitted over computer or telecommunications networks. Choulga et al. do teach that the sensor may be employed as a dosimeter (see col. 5, lines 1 – 3). Tawil et al. teach the use of a

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dosimeter, which incorporates the use of transmitting sensor measurement data using either computer networks or wireless communication networks (see col. 6, lines 52 – 63; col. 7, lines 14 – 55; col. 8, lines 35 – 44). Therefore, it would have been obvious to one of ordinary skill in the art to incorporate the use of either computer networks or wireless communication networks with a dosimeter system, as taught by Tawil et al., with the sensor, as taught by Choulga et al., in order to facilitate the monitoring of potentially hazardous working environments, such as a chemical plant for toxic gaseous components, or nuclear facilities, for radioactive particles.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ahlers et al. teach a cation-selective sensor which comprises a cation-selective coating layer which detects cations based upon detectable changes in the electrical characteristics of the layer.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian J. Sines whose telephone number is (703) 305-0401. The examiner can normally be reached on Monday - Friday (11:30 AM - 8 PM EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill A. Warden can be reached on (703) 308-4037. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.


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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

BJS
May 5, 2003


Bill Warden
Supervisory Patent Examiner
Technology Center 1700